Asosiasi Jamur Mikoriza pada Akar Anggrek *Calanthe pulchra*, *Cryptostylis javanica* dan *Goodyera rubicunda* di Kebun Raya Batturaden

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui asosiasi jamur mikoriza dalam bentuk 1) jaringan akar yang umum ditempati jamur mikoriza, 2) persentase keberadaan jamur mikoriza, 3) genus jamur mikoriza, dan 4) hubungan ketinggian tanah terhadap keberadaan dan genus jamur mikoriza dalam akar anggrek *C. pulchra*, *C.javanica*, dan *G. rubicunda*.

Penelitian ini merupakan penelitian eksploratif dengan metode pengambilan data secara observasi. Lokasi penelitian bertempat di Kebun Raya Baturraden, Laboratorium Mikrobiologi dan Laboratorium Riset, Biologi UNY. Penelitian dilaksanakan pada 31 Maret - 21 Juni, 2015. Jumlah sampel sebanyak 27 herba anggrek. Hasil penelitian menunjukan bahwa jaringan akar anggrek sampel paling umum ditempati jamur mikoriza adalah korteks dengan persentase tertinggi sebesar 30,69% pada Gd1.1(*G.rubicunda*) dan terendah sebesar 1,39% pada Ch3.3 (*C. pulchra*). Genus jamur mikoriza hasil identifikasi berjumlah 9 diantaranya *Ceratorhiza*, *Moniliopsis*, *Epulorhiza*, *Rhizoctonia*, *Trichoderma*, *Fusarium*, *Glomus*, *Acualospora* dan *Entrophospora*. Ketinggian tanah behubungan dengan genus jamur mikoriza karena menjadi faktor isolasi persebaran spora dimungkinkan berkaitan dengan vektor pembawa seperti cacing, arthropoda tanah dan insekta lainya serta faktor kecepatan angin, tetapi ketinggian tanah tidak berhubungan dengan keberadaan jamur mikoriza dalam jaringan akar ketiga jenis anggrek sampel.

Kesimpulan penelitian ini adalah 1) jaringan akar yang umum ditempati jamur mikoriza adalah korteks, 2) persentase tertinggi keberadaan jamur mikoriza sebesar 30,69% dan terendah 1,39%, 3) genus jamur mikoriza hasil identifikasi berjumlah 9, 4) ketinggian tanah berhubungan dengan genus jamur mikoriza tetapi tidak berhubungan dengan keberadaannya dalam jaringan akar ketiga jenis anggrek sampel.

Kata kunci : *asosiasi, jamur mikoriza, C. pulchra*, *C. javanica, G. rubicunda*

Association of Mycorrhizal Fungi in Orchids Root of *Calanthe pulchra*, *Cryptostylis javanica* and *Goodyera rubicunda* at Baturraden Botanical Garden

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ABSTRACT

The aimed of this research was to know mycorrhizal fungi asscociation by 1) the root tissue that usual get occupied by mycorrhizal fungi, 2) the percentage of mycorrhizal occupied, 3) genus of mycorrhizal, 4) interaction of soil altitude toward mycorrhizal occupied and genus of mycorrhizal fungi in orchids root of *C. pulchra*, *C. javanica*, and *G. rubicunda*.

It was explorative research with observation method. This research did at Baturraden Botanical Garden, Microbiology Laboratory, and Research Laboratory of Biology, Yogyakarta State University. It did during March 31 to June 21, 2015. The result showed that the orchid root tissue that usual occupied by mycorrhizal fungi was cortex with the highest percentage was 30,69% at Gd1.1 and the lowest was 1,39% at Ch3.3. It was found 9 genus of mycorrhizal fungi, there were *Ceratorhiza*, *Moniliopsis*, *Epulorhiza*, *Rhizoctonia*, *Trichoderma*, *Fusarium*, *Glomus*, *Acualospora* and *Entrophospora.* Soil altitude related with genus of mycorrhizal fungi in orchid roots sample because altitude isolate the spora distribution. It might related with presence of vector like worm, soil arthropoda, and other insect and wind velocity, but altitude not related toward presence of mycorrhizal fungi in the orchids root sample.

Conculusion of this research is 1) the root tissue that usual occupied by mycorrhizal fungi was cortex, 2) the highest percentage of mycorrhizal occupation was 30,69 % and the lowest was 1,39%, 3) total genus that was identified were 9, 4) soil altitudes related with mycorrhizal fungi genus in orchids root sample but not related with presence of mycorrhizal fungi in the orchids root tissue.

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Key word: *association, mycorrhizal fungi, C. pulchra*, *C. javanica, G. rubicunda*